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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,322	09/12/2003	Laxmi Priya Parida	YOR920030299US1	9308

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EXAMINER	
COUGHLAN, PETER D	

ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,322	PARIDA ET AL.	
	Examiner	Art Unit	
	Peter Coughlan	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *'A'*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. This office action is in response to an AMENDMENT entered July 3, 2006 for the patent application 10/661322 filed on September 12, 2003.

2. The First Office Action of April 6, 2006 is fully incorporated into this Final Office Action by reference.

3. The algorithm for the computation of the invention is a Fibonacci sequence, which was established since 1250, and limits allowance possibility.

Status of Claims

4. Claims 1-29 are pending.

35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-29 are rejected under 35 U.S.C. 101 for nonstatutory subject matter. The computer system must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. The application is an algorithm that searches for patterns along a one-dimensional array. There has to be an application for this method to be employed with to have a useful purpose.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101.

Finding patterns in strings at an academic level is not clear in its purpose or scope. There has to be a reason for finding such strings and their usefulness in a real world application, is questioned. The application as it stands is strictly an academic exercise with no useful and tangible function and/or result.

The invention must be for a practical application and either:

1) specify transforming (physical thing) or

2) have the FINAL RESULT (not the steps) achieve or produce a

useful (specific, substantial, AND credible),

concrete (substantially repeatable/ non-unpredictable), AND

tangible (real world/ non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that

it does not require the practical application, then the claim must be amended.

Claims that recite an algorithm with given parameters with no reason why and no stated use is not statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-17, 20-26, 29 are rejected under 35 U.S.C. 102(b) (hereinafter referred to as **Floratos**) being anticipated by Floratos, 'DELPHI: A pattern-based method for detecting sequence similarity'.

Claim 1.

Floratoes anticipates selecting a new portion of the input string, the new portion differing from a previously selected portion of the input string by at least one new character of the input string (**Floratos,** p457 C1:26 through C2:4; 'Window size' of applicant is equivalent to 'W' of Floratos. When in search mode, the method searches strings of width W. Since a string is being searched this is done by inputting a new portion of the string on one end of the width and removing an old portion at the other end of the width, similar to a window of size 'W' moving down a one-dimensional array.); determining one or more values for how many of the at least one new characters are in the portion of the input string (**Floratos,** p457 C1:26 through C2:4; 'Determining one or more values' of applicant is equivalent to 'L' of Floratos. Where 'L' is the number of matches in a pattern query 'Q'); determining which, if any, names in a plurality of sets of names have changed by selection of the new portion, the plurality of sets comprising a first set and a plurality of additional sets, wherein the first set corresponds to all of the characters in the alphabet and to values of how many of the characters of the alphabet are in the previously selected portion, wherein the values are names for the first set, and wherein each additional set comprises names corresponding to selected pairs of names from a single other set (**Floratos,** p457 C2:5-15; 'First set' of applicant is equivalent to 'query sequence (Q)' of Floratos. 'Additional sets' of applicant is equivalent to matches of 'Q' 'Single other set' of applicant is equivalent to 'D' of Floratos.); and using changes in the names to determine the permutation patterns.

(**Floratos,** p457 C2:5-15; 'Permutation patterns' of applicant is equivalent to 'K' of Floratos.)

Claims 2 and 21.

Floratos anticipates the at least one processor (**Floratos,** p471, C1:6-32) is further configured, in order to determine the plurality of levels (**Floratos,** p457, C1:26-43; 'Plurality of levels' determination is preformed by 'level of our pattern discovery algorithm' of Floratos.): to determine the first set by determining values of how many of each of the characters of the alphabet are in the previously selected portion (**Floratos,** C457, C1:26-43; 'How many of each characters' of applicant is equivalent to 'density' of Floratos.); and to determine the additional sets by assigning names for a given additional set to selected pairs of names from another of the sets, wherein each assigned name is unique to the names for a selected pair. (**Floratos,** p456 C2:44 through p457 C1:7; 'Assigning names' of applicant is equivalent to 'offset list' of Floratos.)

Claim 3.

Floratos anticipates wherein the assigned names are codes. (**Floratos,** p456, C2:20-38; In this example the code is ("A.CH..E"))

Claim 4.

Floratos anticipates wherein the codes are natural numbers. (**Floratos,** p457, C1:17-25; Floratos illustrates the 'backbone' which indicates the importance of location among the query pattern. For example the 'backbone' of the sample in claim 3 would be "1011001".)

Claims 5 and 22.

Floratos anticipates wherein the at least one processor (**Floratos,** p471, C1:6-32) is further configured, when determining which, if any, names in a plurality of sets of names have changed determines that a name has changed to determine that a new name is needed for the changed name. (**Floratos,** p457 C2:44 through p458 C2:15; 'Set of names' of applicant is equivalent to 'π' (or set of <L, W> patterns). The process of 'determining' of applicant is equivalent to 'pattern matching' of Floratos.)

Claim 6.

Floratos anticipates wherein the step of determining which, if any, names in a plurality of sets of names have changed further comprises the step of selecting a new name, not currently in use in the sets of names, for the changed name. (**Floratos,** p458 C1:5 through C2:15 and Figure 1; This pertains to the generation of hash values for every substring. 'New name' of applicant is equivalent to 'hash value' of Floratos.)

Claims 7 and 23.

Floratos anticipates wherein the at least one processor (**Floratos,** p471, C1:6-32) is further configured to determine, for a name that has changed in the sets of names, a location in the input string that corresponds to the changed name. (**Floratos,** p458 C1:5 through C2:32 and Figure 2; A hash table will 'point' to a particular list of offsets of a substring.)

Claim 8.

Floratos anticipates wherein the changed name corresponds to at least two characters of the input string and a location in the input string of a given character of the at least two characters is chosen as the determined location. (**Floratos,** Figures 1 and 2; The generation of hash values is based at least two characters and using the hash values to generate a hash table which 'points' to the beginning of a substring.)

Claims 9 and 24.

Floratos anticipates wherein each of the names in the sets of names corresponds to a pattern, and wherein the at least one processor (**Floratos,** p471, C1:6-32) is further configured, when using changes in the names, to select permutation patterns from the patterns. (**Floratos,** p458 C2:16-32; 'Select permutation patterns' of applicant is equivalent to finding two residues of a substring.)

Claim 10.

Floratos anticipates the step of comparing names that have changed in the sets of names to a database comprising a plurality of stored names. (**Floratos,** p458 C2:46 through p459 C1:4; Floratos illustrates comparing two names that share the same location.)

Claims 11 and 25.

Floratos anticipates wherein the additional sets have names corresponding to only a single pair of names from another set. (**Floratos,** p459, C1:5-22; The 'pair of names' of applicant are 'chained' by Floratos resulting in 'additional sets' of applicant.)

Claims 12 and 26.

Floratos anticipates wherein the at least one processor (**Floratos,** p471, C1:6-32) is further configured, when using changes in the names to determine permutation patterns, to correlate the changed names with permutation patterns. (**Floratos,** p457 C2:44 through p458 C2:32; 'Determine permutation patterns' and 'correlate' of applicant is equivalent to 'searching' and 'pattern matching' of Floratos.)

Claim 13.

Floratos anticipates wherein the step of determining which, if any, names in a plurality of sets of names further comprises, for each changed name, updating a count corresponding to that changed name (**Floratos,** p458 C2:16-32; 'Updating count' of applicant is equivalent to 'increment by one' of Floratos.), and wherein the method

further comprises the step of: performing the steps of selecting, determining one or more values, and determining which, if any, names in a plurality of sets of names until the entire input string has been selected. (**Floratos,** p458 C2:16-32; 'Until the entire input string' of applicant is equivalent to when the counter C, is C[i] equals (n-1) of Floratos.)

Claim 14.

Floratos anticipates wherein portions selected have a predetermined size, and wherein the method further comprises the step of selecting a number of predetermined sizes and performing the steps of selecting, determining one or more values, and determining which, if any, names in a plurality of sets of names for each of the predetermined sizes. (**Floratos,** p459 C2:18 through p460 C1:7; 'Determining one of more values' of applicant is equivalent to 'L, W and K_{min}' of Floratos.)

Claim 15.

Floratos anticipates wherein the step of using changes further comprises the step of determining permutation patterns corresponding to counts greater than or equal to a predetermined count. (**Floratos,** p462 C2:5 through p463 C1:17; Here Floratos illustrates an example of permutation patterns where $k_{min} = 15$ and only patterns with support of 15 or higher are counted.)

Claim 16.

Floratos anticipates the step of determining maximal permutation patterns from the determined permutation patterns. (**Floratos,** p457 C1:8-14)

Claim 17.

Floratos anticipates the step of determining which, if any, names in a plurality of sets of names further comprises the step of determining location lists for each of the names corresponding to permutation patterns (**Floratos,** p458 C1:5 through C2:32 and Figure 2; 'Location lists' of applicant is equivalent to 'hash table' of Floratos.), and wherein the step of determining maximal permutation patterns further comprises the steps of comparing location lists for permutation patterns and eliminating duplicate permutation patterns by using the location lists. (**Floratos,** p458 C2:33 through p459 C1:22; 'Eliminating duplicate permutation patterns' of applicant is accomplished by 'chaining' of Floratos.)

Claim 20.

Floratoes anticipates a memory (**Floratos,** p471, C1:6-32) ; at least one processor coupled to the memory, the at least one processor configured: to select a new portion of the input string, the new portion differing from a previously selected portion of the input string by at least one new character of the input string (**Floratos,** p457 C1:26 through C2:4; 'Window size' of applicant is equivalent to 'W' of Floratos. When is search mode the method searches at strings of width W. Since a string is being searched this is done by inputting a new portion of the string on one end of the

width and removing an old portion at the other end of the width. Must like a window of size 'W' moving down a one-dimensional array.); to determine one or more values for how many of the at least one new characters are in the portion of the input string (**Floratos,** p457 C1:26 through C2:4; 'Determining one or more values' of applicant is equivalent to 'L' of Floratos. Where 'L' is the number of matches in a pattern query 'Q'); determine which, if any, names in a plurality of sets of names have changed by selection of the new portion, the plurality of sets comprising a first set and a plurality of additional sets, wherein the first set corresponds to all of the characters in the alphabet and to values of how many of the characters of the alphabet are in the previously selected portion, wherein the values are names for the first set, and wherein each additional set comprises names corresponding to selected pairs of names from a single other set (**Floratos,** p457 C2:5-15; 'First set' of applicant is equivalent to 'query sequence (Q)' of Floratos. 'Additional sets' of applicant is equivalent to matches of 'Q' 'Single other set' of applicant is equivalent to 'D' of Floratos.); and to use changes in the names to determine the permutation patterns. (**Floratos,** p457 C2:5-15; 'Permutation patterns' of applicant is equivalent to 'K' of Floratos.)

Claim 29.

Floratoes anticipates a computer readable medium (**Floratos,** p471, C1:6-32) containing one or more programs which when executed implement the steps of: selecting a new portion of the input string, the new portion differing from a previously selected portion of the input string by at least one new character of the input string

(**Floratos,** p457 C1:26 through C2:4; 'Window size' of applicant is equivalent to 'W' of Floratos. When is search mode the method searches at strings of width W. Since a string is being searched this is done by inputting a new portion of the string on one end of the width and removing an old portion at the other end of the width. Must like a window of size 'W' moving down a one-dimensional array.); determining one or more values for how many of the at least one new characters are in the portion of the input string (**Floratos,** p457 C1:26 through C2:4; 'Determining one or more values' of applicant is equivalent to 'L' of Floratos. Where 'L' is the number of matches in a pattern query 'Q'); determining which, if any, names in a plurality of sets of names have changed by selection of the new portion, the plurality of sets comprising a first set and a plurality of additional sets, wherein the first set corresponds to all of the characters in the alphabet and to values of how many of the characters of the alphabet are in the previously selected portion, wherein the values are names for the first set, and wherein each additional set comprises names corresponding to selected pairs of names from a single other set (**Floratos,** p457 C2:5-15; 'First set' of applicant is equivalent to 'query sequence (Q)' of Floratos. 'Additional sets' of applicant is equivalent to matches of 'Q' 'Single other set' of applicant is equivalent to 'D' of Floratos.); and using changes in the names to determine the permutation patterns. (**Floratos,** p457 C2:5-15; 'Permutation patterns' of applicant is equivalent to 'K' of Floratos.)

Response to Arguments

6. Applicant's arguments filed on July 3 2006 for claims 1-29 have been fully considered but are not persuasive.

7. In reference to the Applicant's argument:

The present application was filed on September 12, 2003 with claims 1 through 29. Claims 1 through 29 are presently pending in the above-identified patent application.

In the present Office Action, the Examiner objected to the drawings and rejected claims 1-29 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. The Examiner rejected claims 1, 2, 5-14, 17, 22-26, and 29 under 35 U.S.C. §112, first paragraph, because "the specification, while being enabling for describing the method of generating new names for new patterns (is) not consistent with the specifications matching Figures 3A and 3B." The Examiner rejected claims 1-17, 20-26, and 29 under 35 U.S.C. § 102(b) as being anticipated by Floratos, "DELPHI: A Pattern-based Method for Detecting Sequence Similarity," rejected claims 18 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Floratos, in view of Savitch, "Problem Solving with C++," and rejected claims 19 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Floratos, and Savitch, and further in view of Fredman, "Two Applications of a Probablistic Search Technique: Sorting X+Y and Building Balanced Search Trees."

Drawings and Section 112 Rejections
The Examiner objected to FIGS. 3A and 3B and rejected claims 1, 2, 5-14, 17, 22-26, and 29 under 35 U.S.C. §112, first paragraph, because "the specification, while being enabling for describing the method of generating new names for new patterns (is) not consistent with the specifications matching Figures 3A and 3B." In particular, the Examiner noted that the substring S contains only one while FIGS. 3A and 3B indicate that substring S contains two `j' characters.

The specification has been amended to include two `j' characters in substring S. Applicants believe that this amendment addresses the Examiner's concerns and respectfully request that the objections to the drawings be withdrawn.

Examiner's response:

Examiner withdraws the Drawing and Section 112 rejections

8. In reference to the Applicant's argument:

Section 101 Rejections
Claims 1-29 were rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. In particular, the Examiner asserts that the invention has not been limited to a substantial practical application.

The Supreme Court has stated that the "[t]ransformation and reduction of an article 'to a different state or thing' is the clue to patentability of a process claim." Gottshalk v. Benson, 409 U.S. 63, 70, 175 U.S.P.Q. (BNA) 676 (1972). In other words, claims that require some kind of transformation of subject matter, which has been held to include intangible subject matter, such as data or signals, that are representative of or constitute physical activity or objects have been held to comply with Section 101. See, for example, In re Warmerdam, 31 U.S.P.Q.2d (BNA) 1754, 1759 n.5 (Fed. Cir. 1994) or In re Schrader, 22 F.3d 290, 295, 30 U.S.P.Q.2d (BNA) 1455, 1459 n.12 (Fed. Cir. 1994).

Thus, as expressly set forth in each of the independent claims, the claimed methods or system describe discovering permutation patterns from an input string having a plurality of characters, each character being from an alphabet, and transform the input string to permutation patterns. This transformation to permutation patterns provides a useful, concrete and tangible result. For example, the Background section of the present disclosure describes how such permutation patterns are utilized in medical applications related to genes and proteins.

Applicants submit that each of claims 1-29 are in full compliance with 35 U.S.C. §101, and accordingly, respectfully request that the rejection under 35 U.S.C. §10l be withdrawn.

Examiner's response:

Discovering permutation patterns has no practical purpose. What does one do with the detection of a permutation pattern? Is it used to find a collection of carcinogenic amino acids or detection of brown dwarfs in a galaxy? No function or application has been stated for the invention. First Office Action stands.

9. In reference to the Applicant's argument:

Independent Claims 1, 20 and 29
Independent claims 1, 20, and 29 were rejected under 35 U.S.C. §102(b) as being anticipated by Floratos. Regarding claim 1, the Examiner asserts that Floratos teaches "using changes in the names to determine the permutation patterns" (page 457, C2:5-15; `Permutation patterns' of applicant is equivalent to `K' of Floratos).

Applicants note that Floratos is directed to a different problem than the present disclosure. Floratos is directed to "identifying sequence similarity between a query sequence and a database of proteins." (Page 455, first paragraph; emphasis added.) Floratos searches for an ordered sequence in a string. The claims of the present disclosure are directed to discovering permutation patterns. As would be apparent to a person of ordinary skill in the art, permutation patterns indicate that the patterns are related to a non-ordered set of characters. For instance, dictionary.com teaches that the permutations of (1,2,3) are (1,2,3) (2,3,1) (3,1,2) (3,2,1) (1,3,2) (2,1,3). Independent claims 1, 20, and 29 require using changes in the names to determine the permutation patterns.

Thus, Floratos does not disclose or suggest using changes in the names to determine the permutation patterns, as required by independent claims 1, 20, and 29. Additional Cited References

Savitch was also cited by the Examiner for its disclosure of wherein the at least one character is a single character and wherein the step of selecting further comprising selecting a portion of the input string that differs from the previously selected portion of the input string by moving a window one character, from the previously selected portion, along the input string, the window selecting the new portion of the input string. Applicants note that Savitch is directed to a program using an array. Savitch does not address the issue of using changes in names to determine permutation patterns.

Thus, Savitch does not disclose or suggest using changes in the names to determine the permutation patterns, as required by independent claims 1, 20, and 29.

Fredman was also cited by the Examiner for its disclosure of wherein the sets of names are stored in a balanced search tree. Applicants note that Fredman is directed to a search method that translates into an insertion sort, and to the construction of probabilistically binary search trees. Fredman, however, does not address the issue of using changes in names to determine permutation patterns.

Thus, Fredman does not disclose or suggest using changes in the names to determine the permutation patterns, as required by independent claims 1, 20, and 29. Dependent Claims 2-19 and 21-28

Dependent claims 2-17 and 21-26 were rejected under 35 U.S.C. §102(b) as being anticipated by Floratos, claims 18 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Floratos, in view of Savitch, and claims 19 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Floratos, and Savitch, and further in view of Fredman.

Claims 2-19 and 21-28 are dependent on claims 1 and 20, respectively, and are therefore patentably distinguished over Floratos, Savitch, and Fredman (alone or in any combination) because of their dependency from independent claims 1 and 20 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

All of the pending claims, i.e., claims 1-29, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Examiner's response:

'Determination of permutation patterns' is also illustrated in Floratos. (**Floratos,** p462, C1:5 through C2:4) Floratos explains the number of times that a residue R appears in P, which is the bases of permutation of a pattern. Floratos also illustrates a quantitative result which is the frequency of a specific pattern (or permutation). Another example of permutation is on page 457, C1:17-25. Floratos illustrates a backbone (or permutation) of '100111' which is an example of the string of 'A..DEF'. If Floratos were to 'change' the name to 'AB.DEF' then the backbone (or permutation) would be '110111'. First Office Action stands.

Examination Considerations

10. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

11. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

12. Examiner's Opinion: Paragraphs 10 and 11 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Claims 1-29 are rejected.

Correspondence Information

15. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Peter Coughlan

8/30/2006